FIG.1

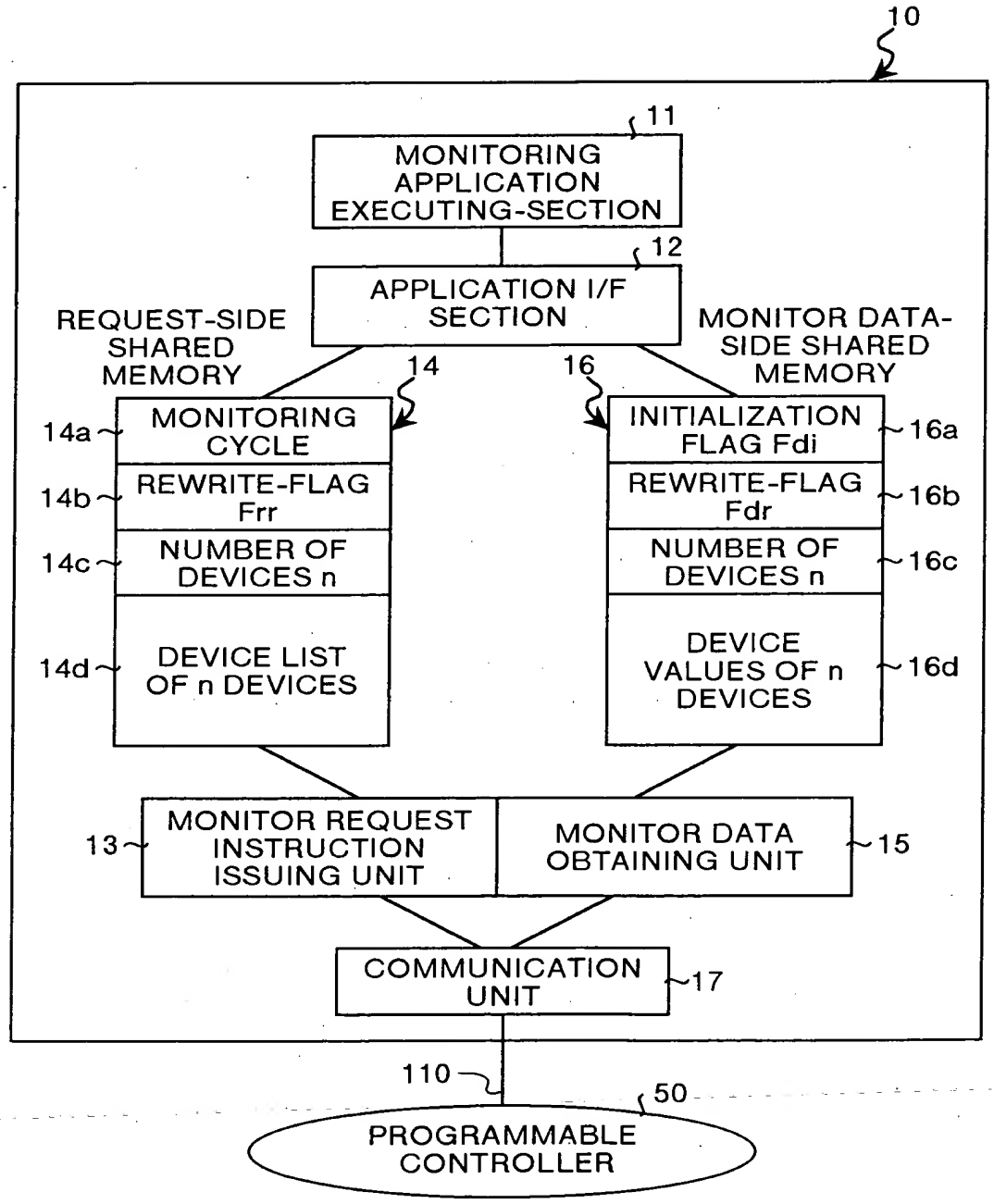

10
11
MONITORING APPLICATION EXECUTING-SECTION
12
APPLICATION I/F SECTION
REQUEST-SIDE SHARED MEMORY
MONITOR DATA-SIDE SHARED MEMORY
14
16
14a
MONITORING CYCLE
INITIALIZATION FLAG Fdi
16a
14b
REWRITE-FLAG Frr
REWRITE-FLAG Fdr
16b
14c
NUMBER OF DEVICES n
NUMBER OF DEVICES n
16c
14d
DEVICE LIST OF n DEVICES
DEVICE VALUES OF n DEVICES
16d
13
MONITOR REQUEST INSTRUCTION ISSUING UNIT
MONITOR DATA OBTAINING UNIT
15
COMMUNICATION UNIT
17
110
50
PROGRAMMABLE CONTROLLER

FIG.2

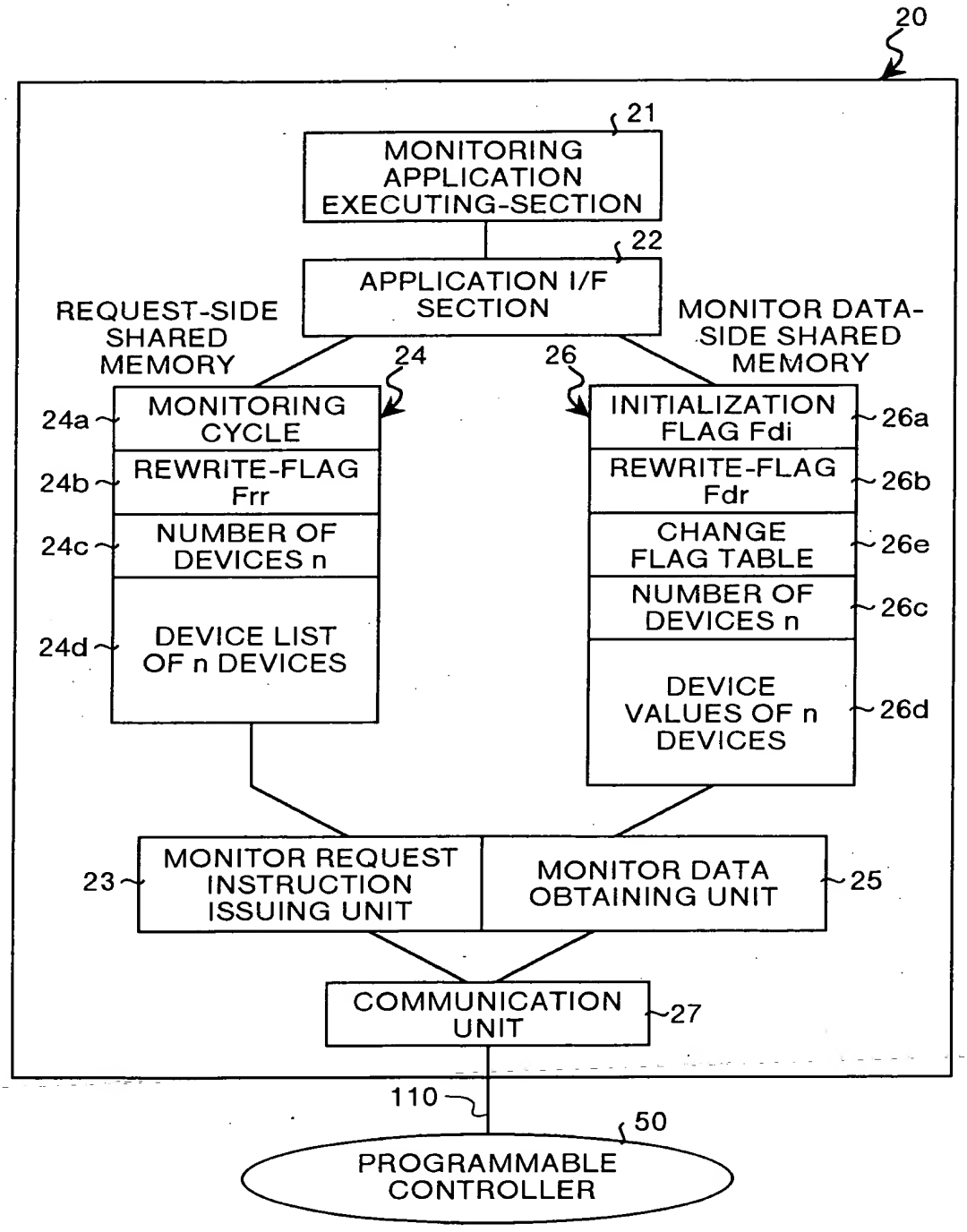

20
21
MONITORING APPLICATION EXECUTING-SECTION
22
APPLICATION I/F SECTION
REQUEST-SIDE SHARED MEMORY
MONITOR DATA-SIDE SHARED MEMORY
24
26
24a
MONITORING CYCLE
24b
REWRITE-FLAG Frr
24c
NUMBER OF DEVICES n
24d
DEVICE LIST OF n DEVICES
INITIALIZATION FLAG Fdi
26a
REWRITE-FLAG Fdr
26b
CHANGE FLAG TABLE
26e
NUMBER OF DEVICES n
26c
DEVICE VALUES OF n DEVICES
26d
23
MONITOR REQUEST INSTRUCTION ISSUING UNIT
MONITOR DATA OBTAINING UNIT
25
COMMUNICATION UNIT
27
110
50
PROGRAMMABLE CONTROLLER

FIG.3

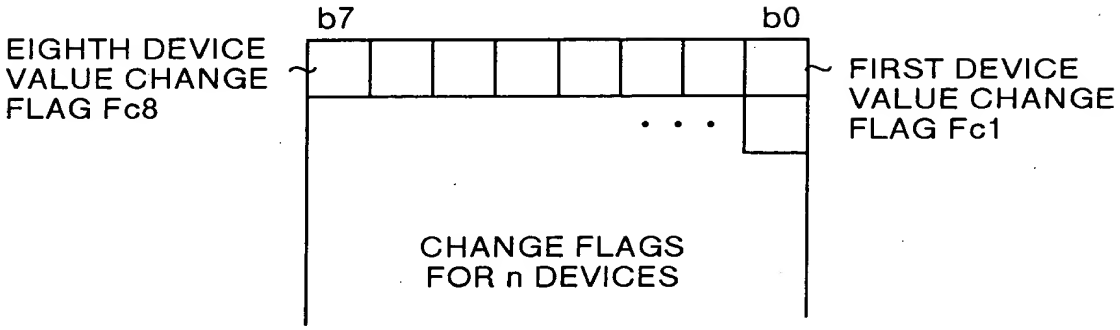

b7
b0
EIGHTH DEVICE VALUE CHANGE FLAG Fc8
FIRST DEVICE VALUE CHANGE FLAG Fc1
CHANGE FLAGS FOR n DEVICES

FIG.4

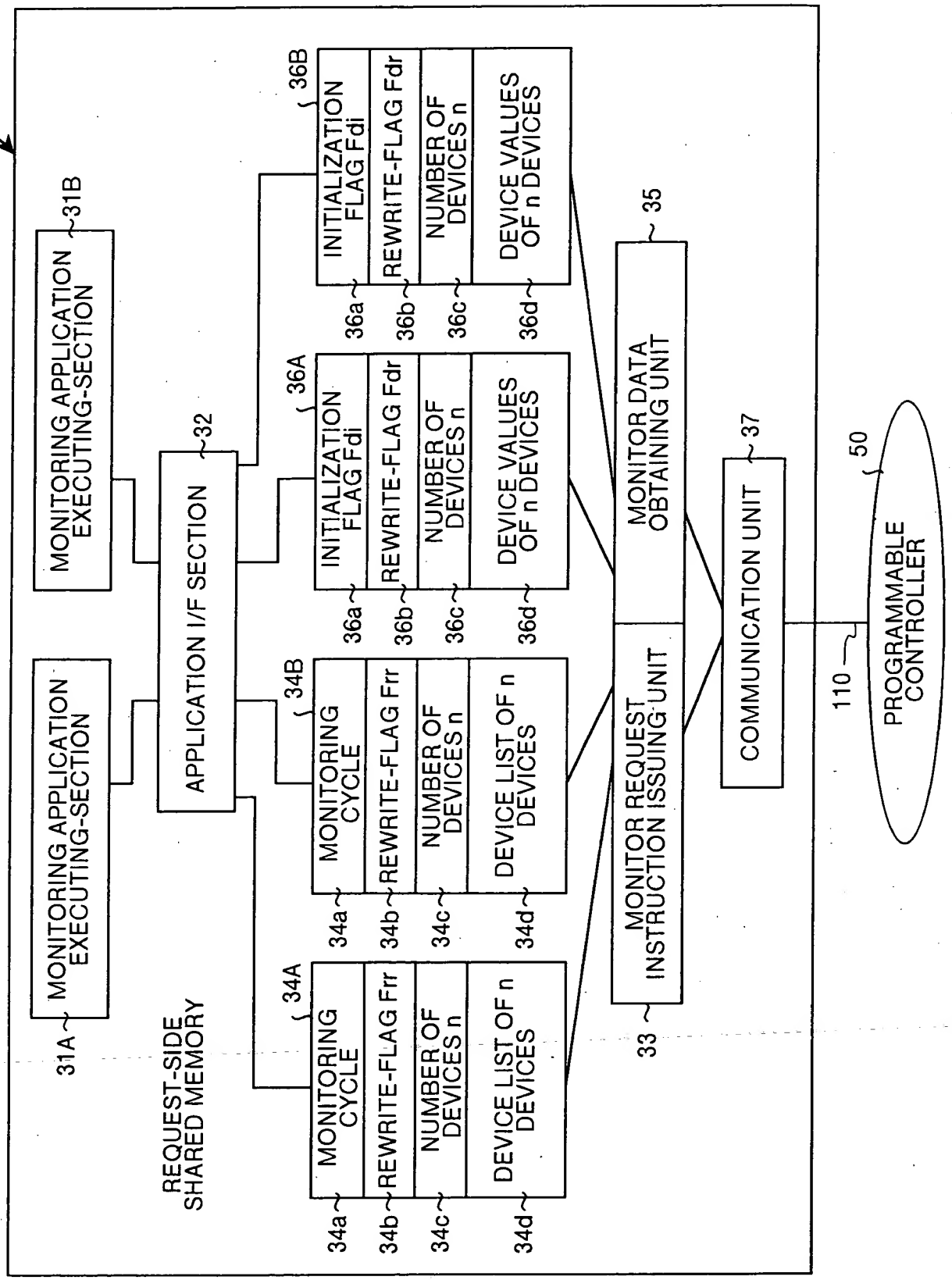

30
MONITORING APPLICATION EXECUTING-SECTION
31B
MONITORING APPLICATION EXECUTING-SECTION
31A
APPLICATION I/F SECTION
32
REQUEST-SIDE SHARED MEMORY
INITIALIZATION FLAG Fdi
REWRITE-FLAG Fdr
NUMBER OF DEVICES n
DEVICE VALUES OF n DEVICES
36B
36A
36a
36b
36c
36d
MONITORING CYCLE
REWRITE-FLAG Frr
NUMBER OF DEVICES n
DEVICE LIST OF n DEVICES
34B
34A
34a
34b
34c
34d
MONITOR DATA OBTAINING UNIT
35
MONITOR REQUEST INSTRUCTION ISSUING UNIT
33
COMMUNICATION UNIT
37
110
PROGRAMMABLE CONTROLLER
50

FIG.5

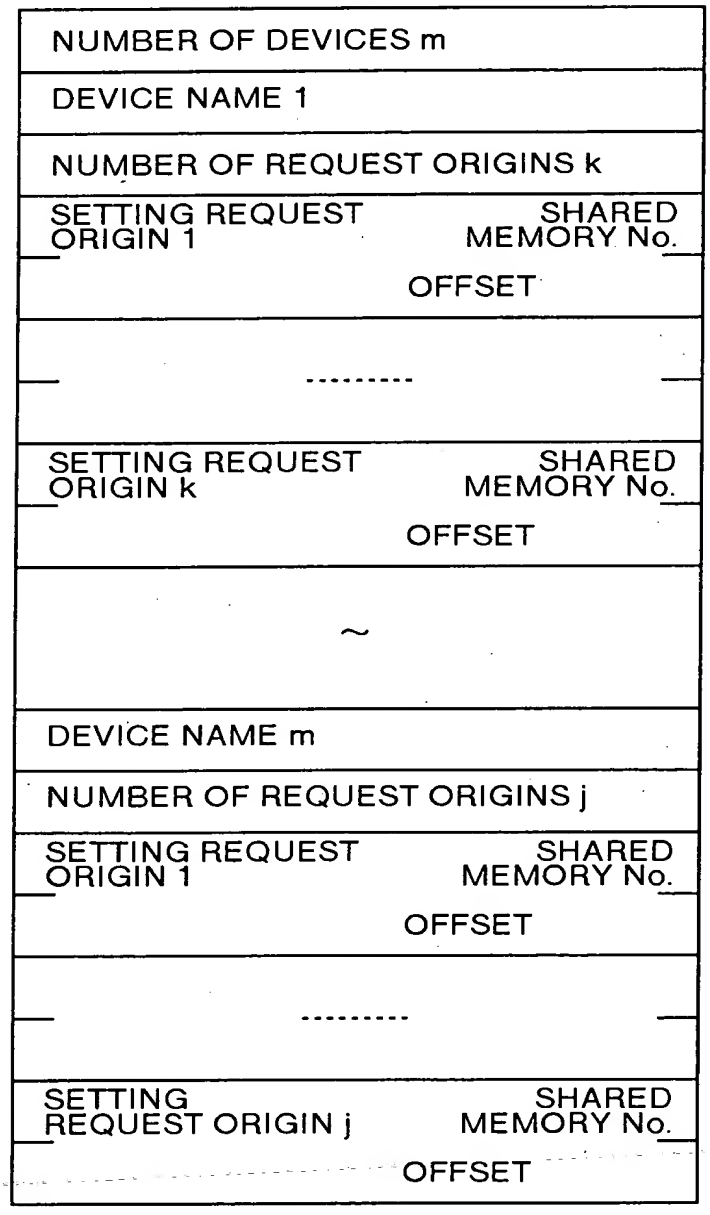

NUMBER OF DEVICES m
DEVICE NAME 1
NUMBER OF REQUEST ORIGINS k
SETTING REQUEST ORIGIN 1
SHARED MEMORY No.
OFFSET
.....
SETTING REQUEST ORIGIN k
SHARED MEMORY No.
OFFSET
~
DEVICE NAME m
NUMBER OF REQUEST ORIGINS j
SETTING REQUEST ORIGIN 1
SHARED MEMORY No.
OFFSET
.....
SETTING REQUEST ORIGIN j
SHARED MEMORY No.
OFFSET

FIG.6

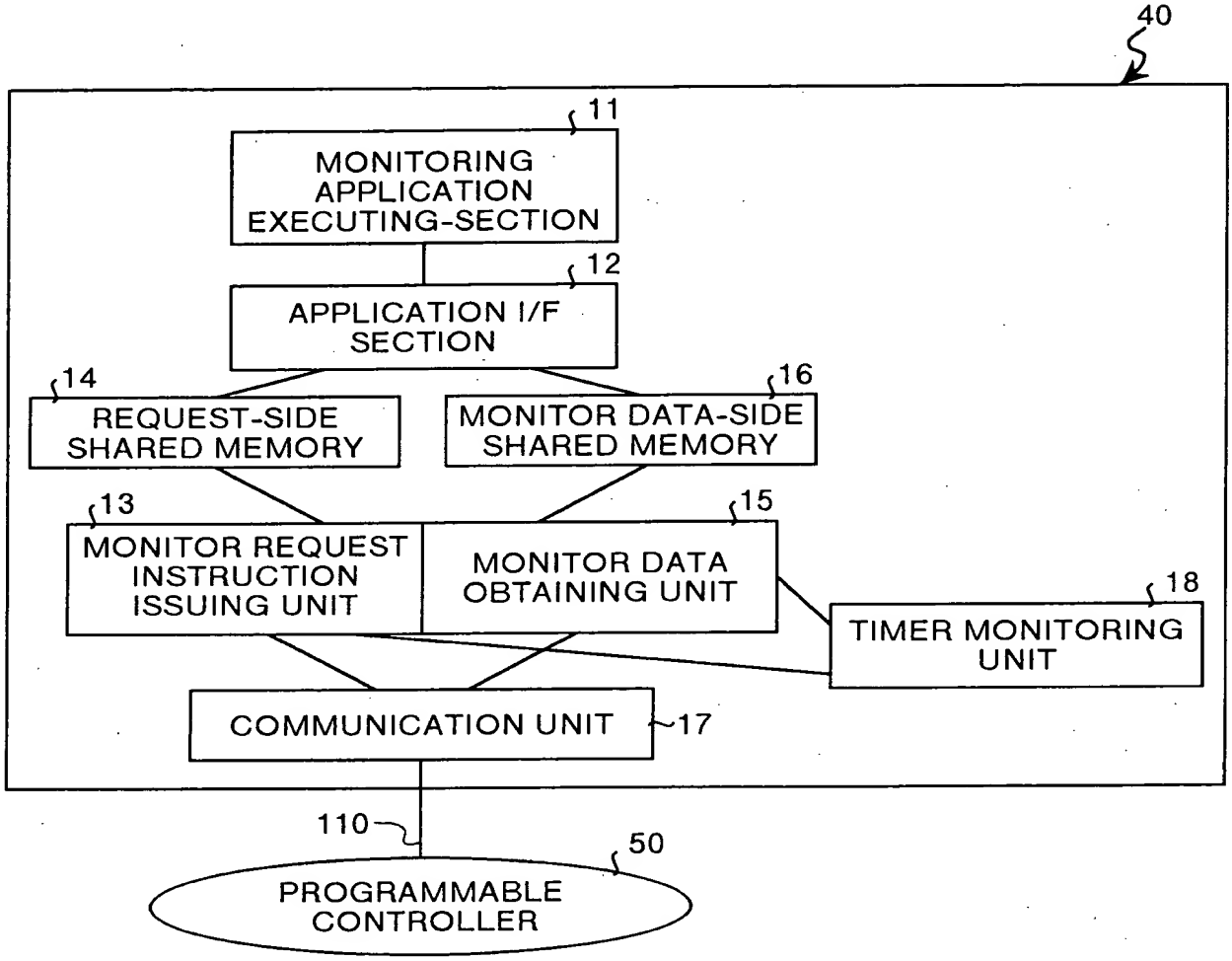
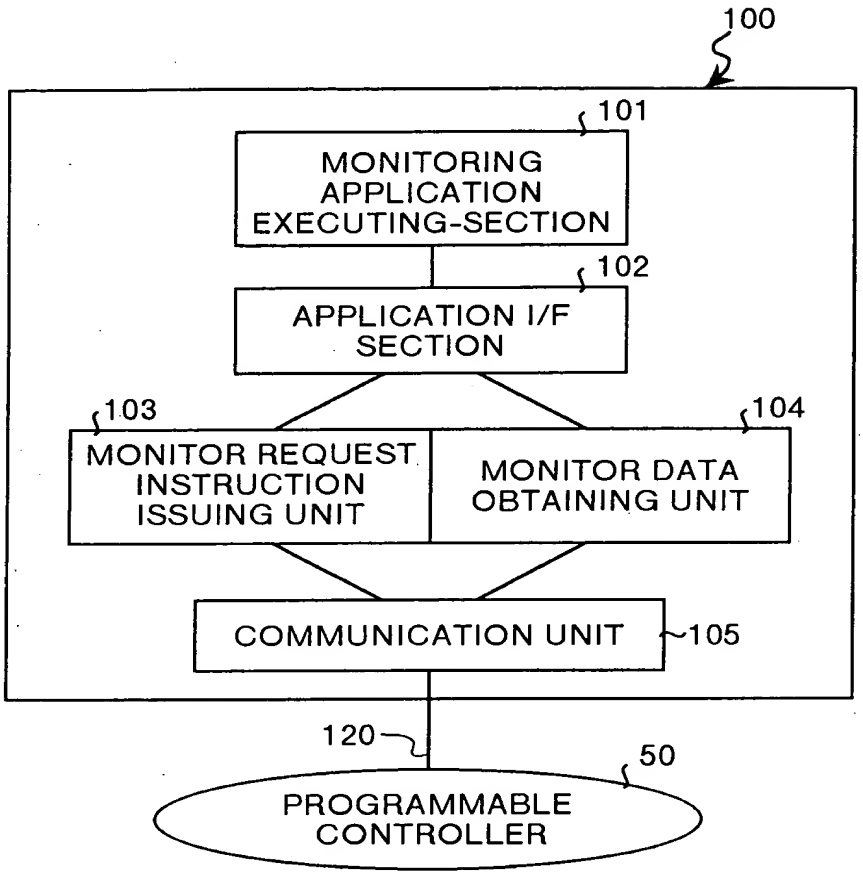

40
11
MONITORING APPLICATION EXECUTING-SECTION
12
APPLICATION I/F SECTION
14
REQUEST-SIDE SHARED MEMORY
16
MONITOR DATA-SIDE SHARED MEMORY
13
MONITOR REQUEST INSTRUCTION ISSUING UNIT
15
MONITOR DATA OBTAINING UNIT
18
TIMER MONITORING UNIT
COMMUNICATION UNIT
17
110
50
PROGRAMMABLE CONTROLLER

FIG.7


100
101
MONITORING APPLICATION EXECUTING-SECTION
102
APPLICATION I/F SECTION
103
MONITOR REQUEST INSTRUCTION ISSUING UNIT
104
MONITOR DATA OBTAINING UNIT
COMMUNICATION UNIT
105
120
50
PROGRAMMABLE CONTROLLER